



Gear Drive Testing

Philadelphia Gear Corporation, King of Prussia, Pennsylvania produces a diverse line of power transmission products, including enclosed gear drives, fluid mixers and variable speed drives. The company specializes in custom units for unique applications, such as Coast Guard ice-breaking ships, steel mill drives, coal crushers, sewage treatment equipment and electricity-generating wind turbines. In the upper photo, the gear drive for a large wind turbine is undergoing final performance testing. The photo at right shows a quality assurance engineer using sophisticated equipment to measure tooth spacing of a large gear.

Philadelphia Gear has recently used two NASA/COSMIC computer programs—one dealing with shrink fit analysis and the other with rotor dynamics problems—in computerized design and test work. The COSMIC programs, developed by Lewis Research Center, were used to verify existing in-house programs, in accordance with Philadelphia Gear's practice of insuring design accuracy by checking its company-developed computer methods against reliable procedures developed by other organizations.

